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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/8 4/2
19317A MLRS MISSILE NUMBERS BC-050 AND BC-057 THRU BC-067 ROUND--ETC(U)
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DR 1221
FEB 1982

METEOROLOGICAL DATA REPORT
19317A MLRS

Missile Numbers BC-050 and BC-057 Thru BC-067
Round Numbers V-213/MD-67 Thru V-223/MD-77
10 Feb 82

by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the BC-050 and BC-057 Thru BC-067, Round Number V-213/MD67 Thru V-223/MD-77 presented in tabular form.		

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INTRODUCTION

19317A MLRS, Missile Numbers BC-50 and BC-057 thru BC-067, Round Numbers V-213/MD-67 thru V-224/MD-78, were launched from Miracle Site, White Sands Missile Range (WSMR), New Mexico, at 1120 thru 1120:57 MST, 10 Feb 1982. The scheduled launch times were 1100 thru 1100:49.5 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the Miracle Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from single theodolite pilot-balloon observations at:

SITE AND ALTITUDE

Miracle	2 Km
Sotim 3	2 Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

Sotim 3	0800 MST
Stallion	0930 MST
Stallion	1000 MST
Sotim 3	1120 MST



Accession For	
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DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	

STALLION MET SITE

STALLION RANGE CENTER

FORM 10

27

NE CI

91.10

NINE

SOTIM 20

NIP

11

L-619 and MIRACLE NET SITE

~~NEW NIP~~

346

AIRSTRIP
(ABANDONED)

TRINITY SITE

AFSWC TARGET

WEAP

WESTON

WEST CI

LD FAST C

STATION W L T

SOTIM 3
MET SITE

CHURCH

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PROJECT SURFACE OBSERVATION

TABLE 1		STATION <u>Miracle</u>																	
DATE <u>10</u> <u>Feb</u> <u>82</u>		X =		Y =		H =													
DAY <u>10</u> <u>MARCH</u> <u>1982</u>		PRESSURE mbs		TEMPERATURE OF °C		DEW POINT OF °C		RELATIVE HUMIDITY %		DENSITY gm/m ³		WIND DIRECTION degs		SPEED kts		CHARACTER kts		VISIBIL- ITY	
TIME M S I 1120		852.3		11.1		0.3		47		1040		350		02				50	

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS		
	1st LAYER		2nd LAYER		3rd LAYER				
	AMT	TYPE	HGT	AMT	TYPE	HGT			
1	CU	5000	3	AC	12000	3	C1	22000	

PSYCHROMETRIC COMPUTATION

TIME: MST	1120	
DRY BULB TEMP.	11.1	
WET BULB TEMP.	5.8	
WET BULB DEPR.	5.3	
DEW POINT	0.3	
RELATIVE HUMID.	47	

TABLE 2

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 10 Feb 1982

SITE: Miracle
 TIME: 1120 MST
 WSTM COORDINATES:
 X= 420,576.31
 Y= 675,956.28
 H= 4,778.13

SITE: Sotim 3
 TIME: 1120 MST
 WSTM COORDINATES:
 X= 451,408.42
 Y= 627,063.23
 H= 4,848.11

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	350	02
150	228	02
210	216	03
270	212	04
330	208	04
390	207	05
500	207	06
650	212	07
800	212	07
950	240	07
1150	246	09
1350	241	11
1550	259	13
1750	264	14
2000	275	18

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	110	06
150	269	04
210	270	06
270	262	06
330	256	06
390	254	06
500	249	05
650	283	04
800	280	05
950	251	06
1150	263	12
1350	280	15
1550	292	20
1750	290	28
2000	277	30

All data obtained from single theodolite tracked pilot-balloon observations.

TABLE 3

AIMING AND T-TIME COMPUTER MET MESSAGES

10 February 1982

SOTIM 3 0800 MST

METCM1336065

101500148849

00293006 27980849

01258007 27880839

02403007 27720814

03449014 27430744

04485020 27060727

05499021 26690683

06512037 26590640

07502042 26340600

08494048 26100563

09489054 25770527

STALLION 0930 MST

METCM1338067

10165051846

00000000 27650846

01262004 27880836

02230003 27650810

03460008 27440771

04510018 27120724

05520024 26730680

06502036 26610638

07497041 26430598

STALLION 1000 MST

METCM1338067

101700151847

00000000 28180847

01117001 27950837

02186002 27670811

13412004 27300772

04534013 27000725

05517020 26650680

06505040 26510638

SOTIM 3 1120 MST

METCM1336065

101830148851

00196006 2853851

01416007 2829841

02532007 2799816

13484010 2762777

04509014 2718730

05505025 2685685

06503036 2670643

07502042 2634603

08486047 2608565

09476050 2594529

STATION ALTITUDE 4847.49 FEET MSL
10 FEB. 52 0807 HRS MST
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
04104200Z
SOTIN 3

TABLE 4

GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
849.2 4947.5	5.7 2.4	79.0
543.3 5034.7	4.9 -1.3	64.0
423.5 5670.8	4.1 -2.5	62.0
774.9 7286.8	.7 -4.5	68.0
700.0 9940.9	-5.4 -0.6	91.0
680.9 10652.6	-7.3 -0.4	92.0
653.1 11720.2	-7.7 -8.9	91.0
635.3 12428.0	-7.2 -11.7	70.0
597.2 14003.7	-10.5 -13.3	60.0
565.7 15371.6	-12.0 -16.8	57.0
532.3 16894.5	-15.0 -18.6	74.0
500.0 18441.1	-18.6 -25.6	54.0
491.3 18870.9	-19.4 -29.8	39.0
467.3 20091.5	-21.0 -35.0	27.0
443.4 21363.4	-22.4 -37.0	25.0
400.0 23825.1	-27.9 -42.1	24.0

16

STATION ALTITUDE 4847.49 FEET MSL
10 FEB. 62 0800 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
041042000Z
SOTIN 3

TABLE 5

GEODETIC COORDINATES
33.0146 LAT DEG
106.49307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND METERS PER SECOND	WIND DIRECTION DEGREES	WIND SPEED KNOTS	INDEX OF REFRACTION
4847.5	849.2	5.7	2.4	70.0	1.057.5	651.0	105.0	6.0	1.000271
5000.0	844.4	5.0	-0.6	66.8	1.054.6	650.0	174.2	5.7	1.000204
5500.0	820.8	4.3	-2.2	62.5	1.038.1	649.7	200.5	5.9	1.000257
6000.0	813.4	3.4	-2.9	63.2	1.022.2	648.0	230.1	7.6	1.000252
6500.0	798.2	2.4	-3.5	65.1	1.007.0	647.4	243.7	10.1	1.000248
7000.0	783.3	1.3	-4.1	66.9	992.1	646.1	251.5	12.3	1.000244
7500.0	768.6	.2	-4.6	69.8	977.4	644.8	260.0	13.4	1.000240
8000.0	754.0	-0.9	-4.9	74.2	962.9	643.4	261.0	14.5	1.000236
8500.0	739.7	-2.1	-5.3	78.5	948.7	642.1	264.7	15.5	1.000233
9000.0	725.7	-3.2	-5.7	82.8	934.7	640.7	267.9	16.5	1.000229
9500.0	711.9	-4.4	-6.2	87.2	920.9	639.3	272.9	18.5	1.000225
10000.0	698.4	-5.6	-6.8	91.1	907.4	637.9	277.0	21.0	1.000222
10500.0	685.0	-6.9	-8.0	91.0	894.5	636.3	281.9	24.2	1.000217
11000.0	671.7	-7.4	-8.5	91.7	879.1	635.0	285.0	28.2	1.000213
11500.0	658.7	-7.6	-8.8	91.2	862.7	635.4	287.4	32.1	1.000209
12000.0	646.0	-7.5	-9.9	82.7	845.7	635.5	287.7	35.8	1.000204
12500.0	633.5	-7.4	-11.8	70.5	829.1	635.0	286.9	38.7	1.000198
13000.0	621.2	-8.4	-12.2	73.6	816.2	634.4	285.4	40.7	1.000195
13500.0	609.1	-9.4	-12.7	76.8	803.5	633.1	283.0	41.1	1.000191
14000.0	597.3	-10.5	-13.3	80.0	791.1	631.8	281.5	40.8	1.000188
14500.0	585.6	-11.0	-15.1	71.7	777.3	631.1	279.9	42.3	1.000184
15000.0	574.1	-11.6	-17.1	63.2	763.8	630.4	278.5	44.3	1.000179
15500.0	562.8	-12.3	-19.7	58.4	750.8	629.6	277.4	47.4	1.000175
16000.0	551.7	-13.2	-18.6	64.0	738.7	628.4	276.5	50.5	1.000172
16500.0	540.8	-14.2	-18.5	69.6	726.6	627.2	275.7	51.3	1.000170
17000.0	530.0	-15.2	-19.0	72.6	715.3	625.9	275.1	52.1	1.000167
17500.0	519.4	-16.4	-21.2	66.2	704.2	624.5	274.9	53.5	1.000163
18000.0	509.0	-17.6	-23.5	59.7	693.3	623.0	275.7	54.1	1.000160
18500.0	498.8	-18.7	-26.1	51.9	682.6	621.0	276.6	53.8	1.000156
19000.0	488.7	-19.6	-30.3	37.7	671.1	620.5	279.9	54.0	1.000152
19500.0	478.8	-20.2	-32.3	32.8	659.2	619.7	282.0	54.7	1.000149
20000.0	469.1	-20.9	-34.5	27.9	647.6	618.8	281.7	58.5	1.000146
20500.0	459.5	-21.4	-35.6	26.4	635.8	618.1	280.9	63.1	1.000143
21000.0	450.1	-22.0	-36.4	25.6	624.2	617.5	280.1	66.0	1.000141
21500.0	440.9	-22.7	-37.3	24.9	613.1	616.6	279.4	68.9	1.000138
22000.0	431.7	-23.8	-38.3	24.7	603.1	615.2	279.0	70.3	1.000136
22500.0	422.8	-24.9	-39.4	24.5	593.3	613.8			1.000133
23000.0	414.1	-26.1	-40.4	24.3	583.7	612.4			1.000131
23500.0	405.5	-27.2	-41.5	24.1	574.2	611.0			1.000129

STATION ALTITUDE 4647.49 FEET MSL
10 FEB. 62 0806 HRS MST
ASCENSION NO. 2

MANDATORY LEVELS
041042000Z
SOTIN 3

ULODET1, COORDINATES
33.66140 LAT DEG
106.49307 LONG DEG

TABLE 6

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUMID.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT	PERCENT	DIR DEG	LOG " OF TN	SPEED KNOTS
800.0	6438.	2.5	-3.4	65.	242.4		9.8
750.0	8140.	-1.3	-5.0	75.	262.1		14.8
700.0	9932.	-5.4	-6.0	91.	277.1		20.7
650.0	11431.	-7.6	-9.3	87.	287.0		34.6
600.0	13871.	-10.3	-13.1	79.	282.0		40.9
550.0	16059.	-13.4	-18.6	65.	276.4		50.7
500.0	18417.	-18.6	-25.6	54.	277.5		53.8
450.0	20977.	-22.0	-36.4	26.	280.1		60.0
400.0	23788.	-27.9	-42.1	24.			

STATION ALTITUDE 4940.00 FEET MSL
 10 FEB. 62 0930 HRS MST
 ASCENSION NO. 4

SIGNIFICANT LEVEL DATA
 041004000,
 STALLION.

GEODETIC COORDINATES
 33.81920 LAT DEG
 106.66501 LONG DEG

TABLE 7

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		HLLIUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
845.9	4940.0	3.2	.6	83.0
845.5	4952.6	4.9	.9	75.0
838.7	5168.8	4.0	-3.0	60.0
793.4	6647.0	2.0	-3.3	68.0
766.0	7576.5	.3	-4.3	71.0
720.6	9178.3	-2.8	-5.8	80.0
700.6	9931.4	-4.9	-6.9	86.0
673.3	10933.0	-7.1	-6.2	92.0
550.8	11803.8	-7.8	-9.0	91.0
645.5	12013.3	-7.0	-9.5	82.0
633.6	12490.5	-7.2	-13.4	61.0
605.7	13641.3	-8.8	-14.5	63.0
591.6	14240.3	-9.7	-17.0	55.0
583.0	14611.9	-9.9	-20.9	40.0
575.0	14962.0	-10.3	-24.5	30.0
564.4	15432.1	-11.5	-22.8	39.0
540.1	16538.1	-13.0	-32.2	18.0
526.4	17179.7	-14.8	-26.5	30.0
500.0	18454.5	-17.1	-36.2	17.0
441.4	21496.9	-22.5	-42.6	14.0
410.5	23239.5	-25.4	-45.6	13.0
400.0	23855.6	-27.4	-47.3	13.0

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 0930 LRS MST
ASCENSION NO. 4

UPPER AIR DATA
0910040004
STATION

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 0930 LRS MST
ASCENSION NO. 4

TABLE 8

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	"IND. DATA" DIR. OF IN DEG.	SPEED OF IN KNOTS	INDEX OF REFRACTION
4940.0	843.9	3.2	83.0	1063.3	648.0	0.0	0.0	1.000269
5000.0	844.0	4.7	71.7	1055.3	650.3	220.4	.1	1.000205
5500.0	828.3	3.0	61.8	1040.5	648.0	220.4	.9	1.000256
6000.0	812.9	2.9	64.5	1023.7	648.0	220.4	1.7	1.000252
6500.0	797.8	2.2	67.2	1007.0	647.2	220.4	2.5	1.000248
7000.0	782.9	1.4	69.1	991.3	646.2	221.0	4.7	1.000244
7500.0	768.2	.4	70.8	976.0	645.1	224.5	8.2	1.000240
8000.0	753.7	-1.5	73.4	961.0	644.0	244.5	11.7	1.000236
8500.0	739.5	-5.1	76.2	946.3	642.6	260.5	15.2	1.000232
9000.0	725.5	-2.5	79.0	931.7	641.6	265.9	17.9	1.000228
9500.0	711.7	-3.7	82.6	918.3	640.1	269.3	20.3	1.000225
10000.0	698.1	-5.1	86.4	905.4	638.5	291.2	22.3	1.000221
10500.0	684.7	-6.1	89.4	891.7	637.2	290.4	24.8	1.000217
11000.0	671.5	-7.2	91.9	877.9	636.0	288.9	27.5	1.000213
11500.0	658.6	-7.6	91.3	862.2	635.5	288.0	30.7	1.000209
12000.0	645.8	-7.1	82.6	844.0	635.1	284.0	34.0	1.000204
12500.0	633.4	-7.2	61.0	826.6	635.7	282.6	36.8	1.000196
13000.0	621.1	-7.9	61.9	814.7	634.9	280.4	39.3	1.000193
13500.0	609.1	-8.6	62.8	801.0	634.0	278.6	40.1	1.000189
14000.0	597.2	-9.3	58.2	787.8	633.1	277.5	39.8	1.000185
14500.0	585.6	-9.8	44.5	774.1	632.4	276.7	39.3	1.000179
15000.0	574.1	-10.4	30.7	760.8	631.7	276.1	38.6	1.000174
15500.0	562.9	-11.6	37.7	749.2	630.3	275.8	40.6	1.000172
16000.0	551.8	-12.3	28.2	736.5	629.4	275.5	42.9	1.000168
16500.0	540.9	-12.9	18.7	724.0	628.5	274.2	44.4	1.000164
17000.0	530.2	-14.3	26.6	713.3	628.9	273.1	46.0	1.000162
17500.0	519.6	-15.4	26.7	702.0	628.0	274.5	47.9	1.000159
18000.0	509.3	-16.3	21.6	690.5	627.5	275.9	49.6	1.000156
18500.0	499.1	-17.2	17.0	679.1	626.4	278.0	51.4	1.000153
19000.0	488.9	-18.1	16.5	667.8	625.3	280.9	53.1	1.000150
19500.0	479.0	-19.0	16.0	656.4	624.2	281.5	54.0	1.000147
20000.0	469.3	-19.8	15.5	645.3	623.1	282.0	55.4	1.000145
20500.0	459.8	-20.7	15.0	634.5	619.0	281.4	59.2	1.000142
21000.0	450.5	-21.6	14.5	623.8	617.9	280.9	62.9	1.000140
21500.0	441.3	-22.5	14.0	613.3	616.8	281.4	63.6	1.000137
22000.0	432.2	-23.3	13.7	602.7	615.8	278.9		1.000135
22500.0	423.5	-24.2	13.4	592.3	614.5			1.000133
23000.0	414.6	-25.0	13.1	582.0	613.7			1.000130
23500.0	405.9	-26.2	13.0	572.0	612.2			1.000128

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 62
ASCENSION NO. 4

NAVIGATORY LOG
0410040004
STALLION
TABLE 9

CLOUDS, COORDINATES
33.11320 LAT DEG
106.00501 LONG DEG

PRESSURE EQUIPOTENTIAL		TEMPERATURE		REL. HUMID. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	TEMPERATURE DEGREES CENTIGRADE		WIND SPEED KNOTS	WIND DIRECTION
800.0	6423.	2.3	-3.2	67.	220.4	4.4
750.0	8126.	-0.8	-4.0	74.	276.3	12.7
700.0	9923.	-4.0	-6.9	86.	291.0	22.0
650.0	11624.	-7.7	-9.1	90.	265.4	32.9
600.0	13868.	-9.2	-15.5	60.	277.8	39.9
550.0	16064.	-12.4	-27.0	27.	275.3	40.1
500.0	18431.	-17.1	-36.2	17.	276.3	51.3
450.0	21001.	-21.7	-41.6	14.	280.8	62.9
400.0	23819.	-27.4	-47.3	13.		

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 1000 HRS MST
ASCENSION NO. 5

SIGNIFICANT LEVEL DATA
0410040005
STALLION

GEODETIC COORDINATES
33.81920 LAT DEG
106.06501 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
846.9	4940.0	7.5	4.6	82.0
841.4	5116.0	6.1	-3.3	51.0
776.4	7254.1	-6	-5.6	69.0
740.2	8505.4	-2.0	-5.7	76.0
700.0	9954.4	-6.0	-6.9	93.0
661.2	11417.7	-8.0	-9.1	92.0
642.8	12139.3	-7.8	-12.5	69.0
617.2	13175.5	-9.4	-14.7	65.0
597.3	14006.2	-10.9	-14.4	75.0
583.2	14608.8	-11.8	-23.2	38.0
550.2	16072.5	-12.8	-25.7	33.0
518.0	17575.7	-16.0	-29.9	29.0
500.0	18450.6	-16.7	-32.9	23.0
494.6	18718.9	-16.7	-33.8	21.0
434.0	21898.5	-24.6	-39.3	24.0
419.6	22705.8	-25.1	-41.0	21.0
400.0	23843.7	-27.5	-43.0	21.0

GEODETIC COORDINATES
33.81920 LAT DEG
106.66501 LON DEG

UPPER AIR DATA
0410040005
STALLION

TABLE 11

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 1000 HRS MST
ASCENSION NO. 5

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4940.0	846.9	7.5	82.0	1047.2	653.9	.0	.0	1.000274
5000.0	845.0	7.0	71.4	1047.3	653.1	218.0	.1	1.000268
5500.0	829.3	4.9	54.2	1036.9	650.3	218.0	.6	1.000254
6000.0	813.9	3.3	58.4	1023.3	648.5	218.0	1.1	1.000250
6500.0	798.7	1.8	62.7	1010.1	646.6	218.0	1.5	1.000247
7000.0	783.9	.2	66.9	997.0	644.7	218.0	2.0	1.000243
7500.0	769.1	-.9	70.4	982.1	643.5	203.7	3.6	1.000239
8000.0	754.6	-1.4	73.2	965.5	642.8	201.7	6.6	1.000236
8500.0	740.4	-2.0	76.0	949.2	642.2	291.4	9.8	1.000232
9000.0	726.2	-3.4	81.8	935.9	640.5	295.6	13.0	1.000229
9500.0	712.4	-4.7	87.7	922.7	638.9	294.4	14.7	1.000225
10000.0	698.8	-6.1	93.0	909.6	637.3	293.4	16.5	1.000222
10500.0	685.3	-6.7	92.6	894.4	636.5	291.5	20.4	1.000217
11000.0	672.1	-7.4	92.3	879.5	635.6	290.2	24.2	1.000213
11500.0	659.1	-8.0	89.4	864.4	634.9	287.4	29.8	1.000209
12000.0	646.3	-7.8	73.4	847.4	635.0	265.4	35.5	1.000202
12500.0	633.8	-8.4	67.6	832.7	634.4	283.4	38.5	1.000197
13000.0	621.5	-9.1	65.7	819.0	633.4	281.6	41.0	1.000193
13500.0	609.3	-10.0	68.9	805.6	632.4	280.6	39.2	1.000190
14000.0	597.4	-10.9	74.9	792.6	631.3	279.4	37.7	1.000188
14500.0	585.7	-11.6	44.7	779.7	630.2	277.6	37.9	1.000180
15000.0	574.2	-12.1	36.7	765.7	629.7	276.5	38.8	1.000175
15500.0	562.9	-12.4	35.0	751.6	629.2	275.8	41.6	1.000172
16000.0	551.8	-12.8	33.2	737.8	628.8	275.2	43.7	1.000169
16500.0	540.8	-13.7	31.9	725.9	627.6	274.7	44.2	1.000165
17000.0	530.1	-14.8	30.5	714.4	626.3	274.6	44.7	1.000162
17500.0	519.6	-15.8	29.2	703.2	625.0	275.5	45.0	1.000160
18000.0	509.2	-16.3	26.1	690.5	624.4	276.8	47.0	1.000156
18500.0	499.0	-16.7	22.6	677.7	624.0	278.5	51.1	1.000153
19000.0	488.9	-17.4	21.3	665.8	623.1	279.6	53.4	1.000150
19500.0	479.0	-18.6	21.7	655.4	621.6	280.9	54.0	1.000148
20000.0	469.2	-19.9	22.2	645.3	620.1	281.2	53.1	1.000145
20500.0	459.7	-21.1	22.7	635.3	618.5	281.0	51.3	1.000143
21000.0	450.3	-22.4	23.2	625.4	617.0	279.2	52.3	1.000141
21500.0	441.2	-23.6	23.6	615.8	615.5	276.8	55.1	1.000138
22000.0	432.2	-24.7	23.6	605.8	614.2	274.3	58.5	1.000136
22500.0	423.2	-25.0	21.8	594.0	613.8	271.8	62.1	1.000133
23000.0	414.4	-25.7	21.0	583.4	612.8			1.000131
23500.0	405.8	-26.8	21.0	573.7	611.5			1.000129

STATION ALTITUDE 4940.00 FEET MSL
 10 FEB. 82
 ASCENSION NO. 5
 MANDATORY LEVELS
 0410040005
 STALLION
 TABLE 12
 GEODETIC COORDINATES
 33.61920 LAT DEG
 106.66501 LONG DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
800.0	6459.	1.9	-4.5	62.	218.0	1.5	
750.0	8155.	-1.6	-5.6	74.	285.7	7.6	
700.0	9946.	-6.0	-6.9	93.	293.5	16.3	
650.0	11843.	-7.9	-11.0	78.	286.0	35.8	
600.0	13878.	-10.7	-14.5	74.	279.7	37.7	
550.0	16063.	-12.8	-25.7	33.	275.2	45.8	
500.0	18427.	-16.7	-32.9	23.	278.3	50.6	
450.0	20999.	-22.4	-37.7	23.	279.1	52.4	
400.0	23808.	-27.5	-43.0	21.			

STATION ALTITUDE 4847.49 FEET MSL
 10 FEB. 82 1120 HRS MST
 ASCENSION NO. 3

SIGNIFICANT LEVEL DATA
 041042000J
 50111 3

TABLE 13

GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
051.0 4847.5	12.1 2.0	53.0
047.9 4947.5	9.8 -3.6	50.0
007.4 6271.3	5.1 -3.7	53.0
700.0 10033.2	-4.7 -6.4	08.0
663.2 11234.3	-5.8 -7.5	80.0
642.8 12232.4	-6.2 -11.9	64.0
615.6 13340.2	-8.5 -12.0	72.0
576.7 14990.3	-13.3 -14.9	88.0
570.4 15265.3	-13.5 -16.3	67.0
561.6 15655.8	-11.5 -23.5	56.0
516.0 18067.3	-15.4 -27.3	35.0
500.0 18558.7	-15.8 -28.3	33.0
424.2 22283.9	-20.1 -36.0	32.0
400.0 23963.8	-27.4 -39.0	32.0

STATION ALTITUDE 4847.09 FEET MSL
 10 FEB. 62 1120 HRS MST
 A50005101 NO. 3

UPPER AIR DATA
 0410420005
 SOTIN 3

GEOLAT. COORDINATES
 33.00146 LAT DEG
 106.49307 LONG DEG

TABLE 14

GEOMETRIC ALTITUDE FSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	"H" DATA WIK "H" OF IN	INDEX OF REFRACTION
4847.0	851.0	12.1	53.0	1035.8	659.1	110.0	1.000206
5000.0	840.3	9.6	38.6	1040.4	655.0	103.0	1.000254
5500.0	830.0	7.8	44.3	1027.8	653.7	90.0	1.000252
6000.0	813.5	6.1	49.9	1015.3	651.7	74.0	1.000249
6500.0	800.4	4.5	55.1	1002.1	649.9	57.7	1.000246
7000.0	783.4	3.2	59.8	987.9	648.3	41.2	1.000243
7500.0	770.6	1.9	64.4	973.9	646.0	26.9	1.000240
8000.0	750.1	.6	69.1	960.1	645.3	20.3	1.000236
8500.0	741.9	-2.7	73.7	946.6	643.7	20.0	1.000233
9000.0	726.0	-5.3	78.4	933.3	642.2	20.1	1.000229
9500.0	714.3	-8.3	83.0	920.2	640.6	20.5	1.000226
10000.0	700.9	-11.6	87.7	907.4	639.1	20.5	1.000222
10500.0	687.5	-15.1	88.0	891.7	638.4	20.3	1.000218
11000.0	674.3	-18.6	88.0	876.2	637.9	20.1	1.000214
11500.0	661.3	-22.1	81.6	860.5	637.5	20.1	1.000209
12000.0	648.0	-25.6	69.6	844.8	637.1	20.2	1.000203
12500.0	636.1	-29.1	65.9	830.7	636.3	20.3	1.000198
13000.0	623.8	-32.6	69.5	817.8	635.1	20.4	1.000195
13500.0	611.7	-36.1	73.5	805.5	633.7	20.3	1.000192
14000.0	599.7	-39.6	78.4	794.1	631.9	20.2	1.000189
14500.0	588.0	-43.1	83.2	783.0	630.1	20.0	1.000186
15000.0	576.5	-46.6	87.3	771.9	628.4	20.0	1.000183
15500.0	565.1	-50.1	84.4	754.1	629.4	20.0	1.000174
16000.0	553.9	-53.6	35.9	738.6	629.7	20.0	1.000169
16500.0	543.0	-57.1	35.6	726.3	628.7	20.0	1.000166
17000.0	532.2	-60.6	35.4	714.2	627.7	20.0	1.000163
17500.0	521.7	-64.1	35.2	702.2	626.7	20.0	1.000160
18000.0	511.4	-67.6	35.0	690.5	625.7	20.0	1.000158
18500.0	501.2	-71.1	33.2	678.0	625.2	20.0	1.000154
19000.0	491.0	-74.6	32.9	667.0	623.9	20.0	1.000152
19500.0	481.1	-78.1	32.7	656.3	622.5	20.0	1.000149
20000.0	471.3	-81.6	32.6	645.6	621.2	20.0	1.000146
20500.0	461.8	-85.1	32.5	635.5	619.8	20.0	1.000144
21000.0	452.4	-88.6	32.3	625.4	618.4	20.0	1.000141
21500.0	443.2	-92.1	32.2	615.5	617.0	20.0	1.000139
22000.0	434.2	-95.6	32.1	605.7	615.7	20.0	1.000137
22500.0	425.3	-99.1	32.0	595.8	614.4	20.0	1.000134
23000.0	416.5	-102.6	32.0	585.8	613.1	20.0	1.000132
23500.0	407.9	-106.1	32.0	575.9	611.9	20.0	1.000130

STATION ALTITUDE 4047.49 FEET MSL
 10 SEP. 62
 ASCENSION NO. 3

MANDATORY LEVELS
 041042000J
 SOTIN 3
 TABLE 15

GEODTIC COORDINATES
 33.00140 LAT DEG
 106.49307 LONG DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIR. DEG	SPEED KNOTS
850.0	4877.	11.4	0.0	46.	109.7	5.9
800.0	6513.	4.5	-3.7	55.	327.0	4.8
750.0	8225.	0.0	-4.6	71.	285.3	12.9
700.0	10024.	-4.7	-6.4	88.	285.6	20.1
650.0	11934.	-6.1	-10.5	71.	282.3	34.3
600.0	13978.	-10.4	-13.4	70.	282.0	43.0
550.0	16162.	-12.3	-24.4	36.	269.1	47.0
500.0	18535.	-15.8	-28.3	33.	273.7	51.0
450.0	21112.	-21.5	-33.6	32.	267.3	50.0
400.0	23927.	-27.4	-39.0	32.		

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